Two

THE ORIGINS OF WAR AND ETHNIC VIOLENCE

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From the perspective of those of us living at present, it might seem that war is an inevitable part of human existence. Warfare and ethnic violence presses around us at every turn. We see its tragic face today in Northern Ireland, Bosnia, Rwanda, the Middle East, and reflecting back from our near and distant pasts. In the minds of the general public, there is a pervasive belief that organised, mortal conflict is somehow inherent to the human species. This seemingly inescapable conclusion can be based on almost any perusal of recorded history, where we find a continuous stream of warfare and violence between nations, states, ethnic groups and religions. Indeed, much of human history is written using such markers as wars, battles, heroic warriors and peace treaties to delineate the major eras of a particular culture or world area. Even in simpler, non-western types of community-based society, anthropologists have found war to be relatively ubiquitous in the contemporary ethnographic record (Ember & Ember 1992; Carneiro 1994).

Since both history and ethnography point to the apparent inevitability of war, it is a relatively easy leap to assume that the causes of war are inherent or natural to humanity. The evidence here, however, is a little more ambiguous. For example, it has been argued that there are biological foundations for aggression in humans, particularly among males (Lorenz 1966). While such arguments are intriguing and perhaps intuitively compelling, they are all short on the substantive data needed to confirm them empirically. No one has yet discovered a warfare gene or complex of genes, nor have they been able to show that some mix of hormones leads inexorably to combat and organised violence. Where biological models *may* prove helpful in the study of warfare is in understanding the possible relationships between the participation of men in combat and the reproductive 'fitness' of those men (Chagnon 1990).

Another argument, developed inductively and again based largely on intuition, maintains that people who are culturally or ethnically different from one another have a fundamental fear and dislike of one another. It is pertinent (and perhaps risky) here to look to the devastating situation today in Bosnia. Many media accounts of the events maintain that the ethnic violence and hatred was there before the break-up of the state of Yugoslavia, but it was suppressed by the iron-fisted rule of communism. Released from the

rule of communism, the inherent violence was allowed to flourish, growing into ethnic warfare. As the media then search for the causes of the conflict, it is depicted as a power struggle between ethnic groups who have always hated one another. *Why* they hate one another is either attributed to historic reasons (e.g. the relationship between the Croats and Serbs during the Second World War) or to the in-born boundary of distrust and conflict between ethnically different groups. The reasoning is that their religions, their values, their cultures are all *so* different that they cannot live side by side in peace. Ethnic diversity in this and many other cases around the world is seen as a reasonable explanation by itself for hostile and combative relationships between groups of people (see Horowitz 1985 for a discussion of ethnic diversity and conflict).

The problem with making inferences about the inevitability of war or the inherent quality of warfare in human existence on the basis of historic or even ethnographic records is that all those records date from very late in the sequence of human development. They also come from a time when all human society has been dominated by the presence of large state polities intimately involved in regional or global systems of economic competition. Even the simplest band societies of South Africa or the Amazonian rainforest have suffered significant impact from the aggressive dominance of western colonialism for at least three or four hundred years (Ferguson & Whitehead 1994). The pervasive warfare we see today throughout the world, whether in simple or in complex societies, all takes place within the context of the political, economic, environmental and demographic relationships characteristic of the modern world system. Any inferences we can draw from the historic and ethnographic record about the inevitability of warfare only pertain to the relatively recent circumstances brought about by the evolution and global spread of the nation state. Warfare may be ubiquitous in the modern and historic worlds, but humanity has been around a lot longer than the nation state. If we want to look at whether warfare and the hatred of enemies is an inherent characteristic of the human species, we must look back prior to the rise of the nation state.

The historical record around the world is only a few thousand years old. We have written records from Mesopotamia several thousand years before Christ, and within a thousand years or so these are followed by systems of writing in the classic civilizations of the Old World, namely Egypt, India and China. For the New World, the first writing system, that of the Maya, does not really develop until the first millennium AD. In all these cases, the development of writing went hand in hand with the evolution of highly complex state-level societies, with centralised government, organised religion, and, significantly, a standing army. In most cases, writing first developed primarily as a means of keeping records for the government and bureaucracy. But every early writing system quickly expanded to recount historical events, glorify the rulers and pronounce the outcomes of wars. So even from the very beginning of the historic era, war is an integral part of the political relationships between the earliest state-level societies (Haas 1982). However, what if we go back prior to the written record – back into the prehistoric past?

Five or six thousand years may seem like a long time to those of us living our lives in the present, but five or six thousand years is but a tiny slice in the very long sequence of human development. The first human-like creatures diverged from their primate relatives in Africa several million years ago. The first modern *Homo sapiens* in turn also emerged in Africa

several hundred thousand years ago, and soon migrated across most of Africa, Europe and Asia. Looked at from the perspective of several hundred thousand years of humans wandering across the planet, the last five thousand years of complex nation states begins to lose its stature as a marker of what is natural or inherent in the human species. What has happened in the past five thousand years demonstrates the *capacity* of humans for certain kinds of behaviour, not the *predisposition* of humans towards certain kinds of behaviour.

The sequence of human prehistory prior to the development of writing then assumes enormous importance in any effort to understand the fundamental causes of warfare within the human species. Furthermore, the only scientific medium we have for looking back to the origins and evolution of patterns of warfare in the human species is archaeology. Within this context, archaeological research comes to assume a critical role in helping to understand the causes of warfare and ethnic conflict across cultures and across time. It is archaeology and the archaeological record that hold the most appropriate intellectual resources to answer broad, pressing questions about the inevitable or intrinsic qualities of human warfare.

When we do turn to the archaeological record prior to the beginnings of writing, it is immediately interesting to note that we find that warfare is not nearly so ubiquitous as we see today. With some exceptions, it appears that warfare tends to go hand in hand with increasing political complexity and rising levels of population density. There is also growing evidence that in virtually every part of the world where we have explicitly looked into the question, we can determine when and why warfare starts in a specific prehistoric sequence. Furthermore, archaeologists have found that as long as the circumstances that led to warfare persist, the warfare also persists. At the same time, there are bodies of archaeological evidence showing that when circumstances change over a long period, warfare can also dissipate, and eventually disappear. It should be noted here that Keeley, in his recent book, *War Before Civilization* (1996), makes the point that war is much more pervasive in the archaeological record than has previously been recognised. However, Keeley's analysis, rather than leading to the conclusion that war was a universal in the past, forces us to examine the critical question of why warfare appears and disappears at different times and places (see Ferguson 1984; 1990; 1997).

Although this is the first in a series of chapters on patterns of warfare in Europe, it will nevertheless focus on the New World, to illustrate some of the kinds of insights that can be gained from looking at the archaeology of warfare. The examples cited relate to both the rise and fall of warfare, and give some perspective on the relationship between warfare and the existence of ethnically different people who might be labelled and attacked as 'enemies.'

For a number of reasons, the North American continent provides an ideal laboratory for examining patterns of prehistoric war and the relationship between war and ethnicity. First, North America was not significantly affected by the advanced nation states of Latin America or the Old World until the arrival of Europeans in the fifteenth and sixteenth centuries. Its evolutionary sequence is thus indigenous, and relatively 'pristine' (Fried 1967) in the sense of not being influenced by more complex outside societies. Second, the sequence is fairly short, given that humans did not enter North America much before 15,000 years ago (only archaeologists would think of 15,000 years as a 'short' time.) We therefore have a reasonably well-defined 'experiment' through which to examine the

origins of warfare. Finally, there has been more than a century of research by literally thousands of archaeologists working on widely disparate ancient cultures in highly diverse environments. The result of this research is that for large areas of prehistoric North America, there are marvellously rich excavation and survey records, coupled with detailed chronological charts and palaeo-climatological reconstructions. My point here is not just Yankee bragging about the great American archaeological record, but to emphasise that a comprehensive prehistoric database provides a critical foundation for understanding the complexity and detail of evolving patterns of warfare.

Looking at North America as a laboratory for studying the origins and evolution of warfare in a prehistoric context, there are a number of insights to be gained when we look at different times and different places. If we start right at the beginning of human occupation on the continent, we find that warfare does not seem to be part of the cultural picture. Although the exact date of the first humans in the New World is the subject of much dispute, the first identifiable and abundant cultural assemblages are those of the big-game-hunting Palaeoindians of roughly 13,000 to 7,000 years ago (plus or minus a millennium). These first nomads would have crossed over the Bering Straits from Siberia and entered into a hunter's paradise. North America was a land of abundant game, including mammoth, mastodon, horses, large bison and other Pleistocene animals. Never before had these animals seen human beings or been exposed to human predation.

From a modern perspective, this might seem to be an entrepreneur's paradise – what a perfect opportunity to go in and stake out the best plots of land to be fully exploited and defended against all-comers. We might expect to see the rapid emergence of discrete, territorially based social units centred on optimal resource zones. This is not what happened, however. These first pioneering nomads, finding a land of plenty with ample resources for all, did not stake out territorial claims, but rather spread far and wide in very small, mobile, nomadic bands. The archaeological record gives no evidence of territorial behaviour on the part of any of these first hunters and gatherers. Rather, they seem to have developed a very open network of communication and interaction that spread across the continent.

Starting with the first recognisable Palaeoindian archaeological assemblage, the Clovis, we find what is truly a remarkable pattern: virtually identical artefacts – specifically, a very distinctive type of fluted spearpoint (Fig. 1) – are found distributed throughout the North American continent, from Maine to Mexico, and from the East Coast to the West, a total area of about 15,000,000 km^2. Other types of Clovis artefacts, although made of locally available stone materials, are also very similar across the entire continental region. The widespread distribution of the Clovis stone tools across North America is indicative that there was free and open interaction between the small, nomadic bands of hunters and gatherers spread across the entire continent. There were no cultural boundaries separating one band or group of bands from any of the others, and there is no evidence of competition or ethnic differences of any kind setting one group apart from any of the others.

In the earliest stages of human occupation in North America, then, with low population densities and an abundance of resources for all, everyone looks basically alike. Most importantly for the focus of the present discussion, we find no sign anywhere in the archaeological record of even a *hint* of conflict or warfare. There are no skeletal remains with markers of violence such as parry fractures, broken heads or spearpoints embedded

in the body, nor is there any indication that the Clovis people selected camp-sites that were in any way strategically or defensively located. This negative evidence is not in and of itself convincing proof of the absence of warfare, since relatively few Clovis sites and even fewer human remains have been excavated. However, the Clovis data does provide one empirical case that does not openly support the argument that warfare is a ubiquitous and 'natural' component of human affairs. In fact, it is difficult to see how or why the Clovis people could have been in conflict with one another, given both the abundance of resources and the marked similarities of their cultural assemblages.

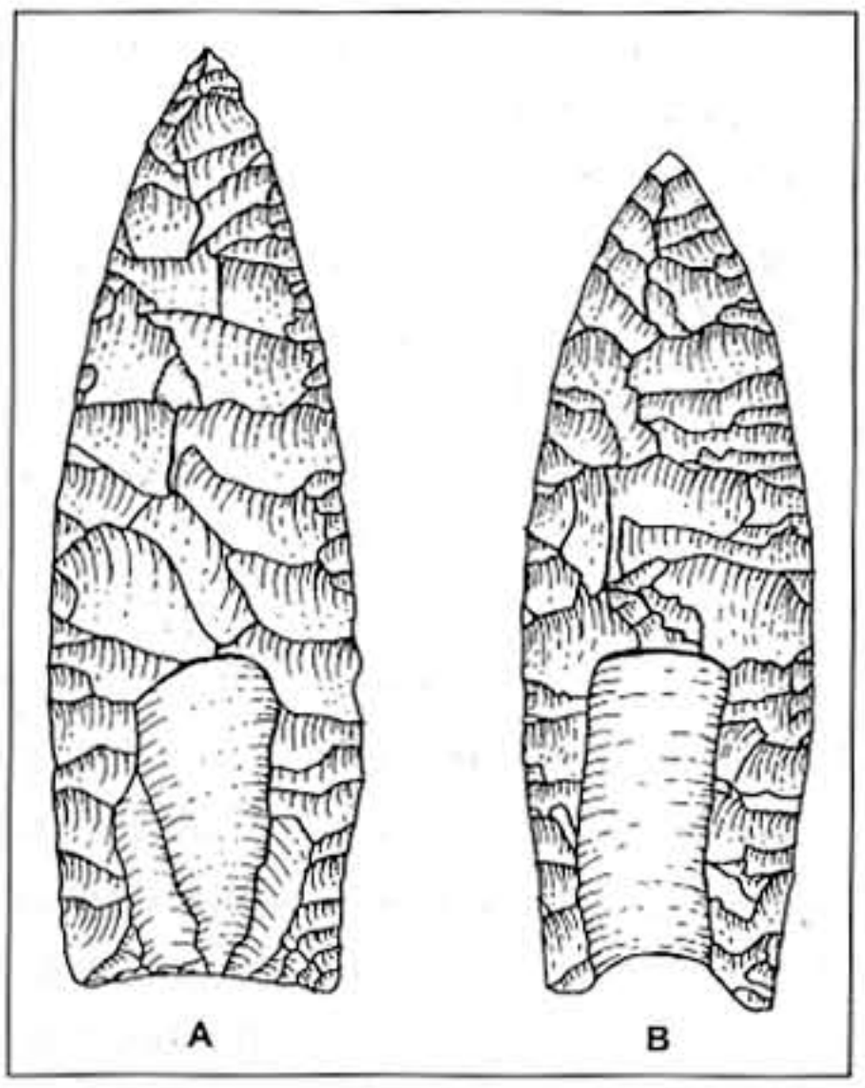

Fig. 1. Two Clovis fluted points showing similar human occupations across North America: A. Blackwater Draw, New Mexico; B. Vail site, Maine, dating to 11,500–11,000 BP.

As we move forward in time in North America, the environmental and demographic circumstances change, as do the patterns of interaction among the people. Across the continent, the time from approximately 11,000 years ago to the start of the first millennium AD is marked by gradual growth in the size and density of population, and by environmental changes that began to impinge on the abundant qualities of the New World paradise. The big-game animals of the late Pleistocene mostly became extinct, and environmentally, the continent came to look more and more like it does today. Archaeologically, we see that after the Palaeoindian period, the open, continent-wide network of communication and interaction begins to break into somewhat smaller regional cultures. These regional cultures, still mostly characterised by a nomadic hunting and gathering form of subsistence, are only loosely defined on the basis of types of spearpoints and other kinds of artefacts (Bettinger 1991). While the overall similarities of tool types within these regional cultures are indicative of close interaction and communication, there are no sharp lines clearly separating one region from its neighbours; instead, there tends to be an intermingling and blurring of artefacts and artefact types at the loose boundaries between the regions. Within these broad regional cultures, we find that there are distinct differences in the emergence and evolution of warfare. Rather than try to relate the full range of complexity across the continent, I will focus on the South-western United States, and compare it briefly to a very different pattern found in the Eastern US.

The south-west, an area of about 700,000 km^2 occupying the present states of Arizona, New Mexico, Utah and Colorado, has been both the training ground and the proving ground for much of American archaeology for over a century. As a result, the archaeological record for the south-west is filled with detail on chronology, settlement, economics and social organisation. A combination of variables makes this an optimal area for studying prehistoric warfare. First, the chronometrics for the area are unparalleled for a prehistoric context. There is a highly refined tree-ring record for the area, stretching back thousands of years, and this record enables us to date the construction and abandonment of

sites with considerable accuracy. In some areas, it is possible to determine within a decade, if not to a specific year, when a site was founded and when it was abandoned.

Researchers have also been able to correlate the dendrochronological record with palaeo-environmental data to develop detailed reconstructions of past patterns of annual precipitation, erosion/aggradation, fluctuating water table and changing botanical communities. Thus, it is not only possible to determine when a site was occupied, but also to measure the prevailing weather patterns, availability of fuel-wood, and the potential productivity of the surrounding soils and biological zones (Van West 1994; Gumerman 1988).

Complementing the chronometrics and palaeo-environmental records is a rich body of excavation and survey data from more than a century of concerted archaeological research. The environment of the south-west is dry and warm, and as a result, preservation of architecture and material culture is good. Archaeological sites, from lithic scatters to large villages, are visible on the surface, and much detail can be recorded, even without excavation. Furthermore, because of a relatively sparse modern population and limited farming, the destruction of sites has been substantially less than in many other areas.

Taken together, the chronological, palaeo-environmental and archaeological records from the south-west provide a level of detail that allows us to see both the presence and absence of prehistoric warfare, and to examine closely the causes, nature and evolution of warfare on local and regional levels.

Looking across the south-west in the time following the Clovis and the era of the big-game hunters, the region was occupied by generalised hunters and gatherers who pursued a relatively stable annual round. Population densities were relatively low, and there were no significant concentrations of people in specific locales. Across the region, there are few material manifestations of cultural differences within the resident population. Tool assemblages and styles of projectile points are similar, as are settlement and subsistence strategies. In looking for signs of conflict, violence or warfare in this nomadic population, we find that there is a period of more than 5,000 years when there continues to be not a single manifestation in the archaeological record. Here, the negative evidence begins to carry more weight, since the record for this long period is much richer than for the early Palaeoindian period. Again, there are no signs of violence in the skeletal population in terms of broken heads, scalp marks, parry fractures or projectile points embedded in bodies, nor do we find villages or camp-sites being located with an eye to defence or the guarding of territory.

Beginning in the first millennium BC, this long period of peaceful hunting and gathering started to change, and the rate of change accelerated for the next 2,000 years. Gradual population growth filled in most of the environmental niches, and we begin to see the first experiments with sedentism and intensification of production, either through specialised procurement or simple horticulture. The nomadic bands began to stay in one area more consistently as they either exploited specialised resources or tended occasional crops. With population on the rise, nomadic bands were also encountering more and more neighbours searching for the same food resources.

Looking then across the region in the first millennium BC, we begin to see the end of the pattern of undifferentiated hunters and gatherers. Across the region, people began to adopt corn-based agriculture and settle into permanent or semi-permanent communities. Although basic patterns of architecture and material culture are similar across the region, the different

parts of the south-west quickly became distinct from each other in terms of the details of material culture, subsistence strategies and settlement. Specifically, archaeologists are able to distinguish the Hohokam culture area in the desert south, the Mogollon culture area in the mountainous region, and the Anasazi culture area in the plateau and canyon region to the north. Each of these groups had distinctive pottery designs, lithic artefacts, housing styles (Fig. 2), subsistence strategies, religious practices, and so on. These groups were clearly different from one another culturally and ethnically. We will focus here on the Anasazi, who were the ancestors of the modern Pueblo people widely known in the South-west today, to examine the origins of enmities and warfare.

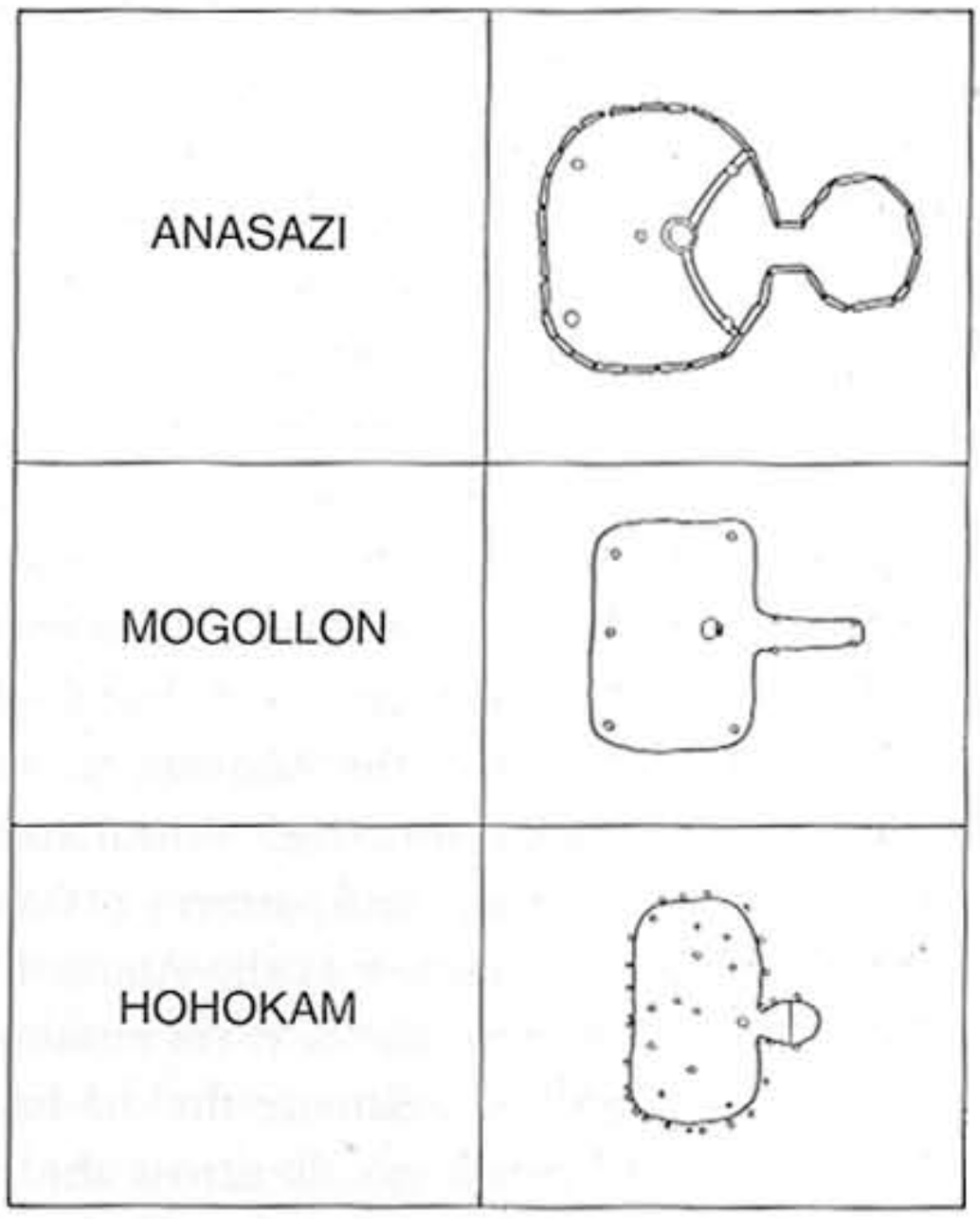

Fig. 2. American south-west pithouses from the three major culture groups – Anasazi, Mogollon and Hohokam – dating to c. AD 500–900. Small circles represent posts, and the central larger circle the fire pit.

Among the Anasazi, the transition from a nomadic hunting and gathering lifestyle to one of settled village agriculture was a gradual one, extending over more than a thousand years (Plog 1997; Cordell 1997). As in other parts of the world, the development of agriculture in the South-west resulted from a combination of growing population and climatic changes that affected the availability of the resources that could be obtained through hunting and gathering. Without enough wild food resources to feed a growing population, the Anasazi began to devote an increasing amount of time to growing their own food resources. The increased time spent on cultivating such crops as corn, beans and squash led in turn to an increasingly sedentary lifestyle, and to corresponding changes in material culture. They constructed permanent houses, adopted ceramics, and largely gave up the throwing-spear in favour of the bow and arrow. The sedentary life also brought with it profound changes in the nature of social relations within the Anasazi culture area. Instead of a relatively open network of nomadic bands interacting with each other off and on throughout the year, the bands settled down into communities, and the communities were faced with each other as permanent neighbours.

The presence of neighbours, even semi-permanent ones, requires the forging of new kinds of social and political ties. If for no other reason, neighbouring communities must have some political means of settling inter-group disagreements over land, water and the like, since the option of moving away to new encampments is no longer so simple. In addition to finding means to settle disagreements, it can be expected that most neighbouring communities will be linked by common language, kinship ties, exchange, religious activities and general socialising. Archaeologically, we begin to see the increased patterns of interaction among the Anasazi by AD 500. It can be seen in such things as

communal religious facilities and localised, subregional variation in ceramic design styles, arrowhead types and some architectural features (Plog 1984).

Over the course of the next five hundred years, the population of the Anasazi grew significantly, and the people became increasingly reliant on domesticated crops, principally corn. During this same period, we also see the process of increasing regional differentiation. As the people became permanently sedentary in year-round villages, they interacted more frequently with their neighbours, and less with people outside the immediate area. They then became more like their immediate neighbours, and less like the people outside their sphere of neighbourly interaction. By AD 700, this pattern was well developed, and becomes evident in the appearance of distinctive subgroups or 'branches' within the Anasazi area. In the archaeological record, the pattern is manifested in about six different branches of the Anasazi, such as the Mesa Verde, Kayenta and Cibola. Each of these had its own distinctive cultural assemblage of artefacts, design styles, architecture, religion, burial practices and patterns of community interaction (Haas 1989).

These different branches of the Anasazi then lived side by side with each other in the northern south-west for the next six hundred years. All the evidence we have indicates that this was a peaceful co-existence for the first five hundred years. There is active exchange of resources and exotic goods across the tribal boundaries, and there continue to be no signs of either intra-tribal or inter-tribal warfare. It should be noted that there are isolated signs of violence in Anasazi culture during this time. For example, physical anthropologists have, documented a number of instances of aggressive cannibalism where it appears that people were not only eaten, but their facial bones were deliberately smashed into small fragments (Fig. 3) (Turner 1989; 1993; Turner & Turner 1992; 1995; White 1992). These occasional manifestations of violence all appear to be internal conflict within communities, however, apparently aimed at social control.

Similar kinds of internal homicide are expressed in the ethnographic record of the Pueblos in the execution of people accused of being witches. Signs of inter-group conflict,

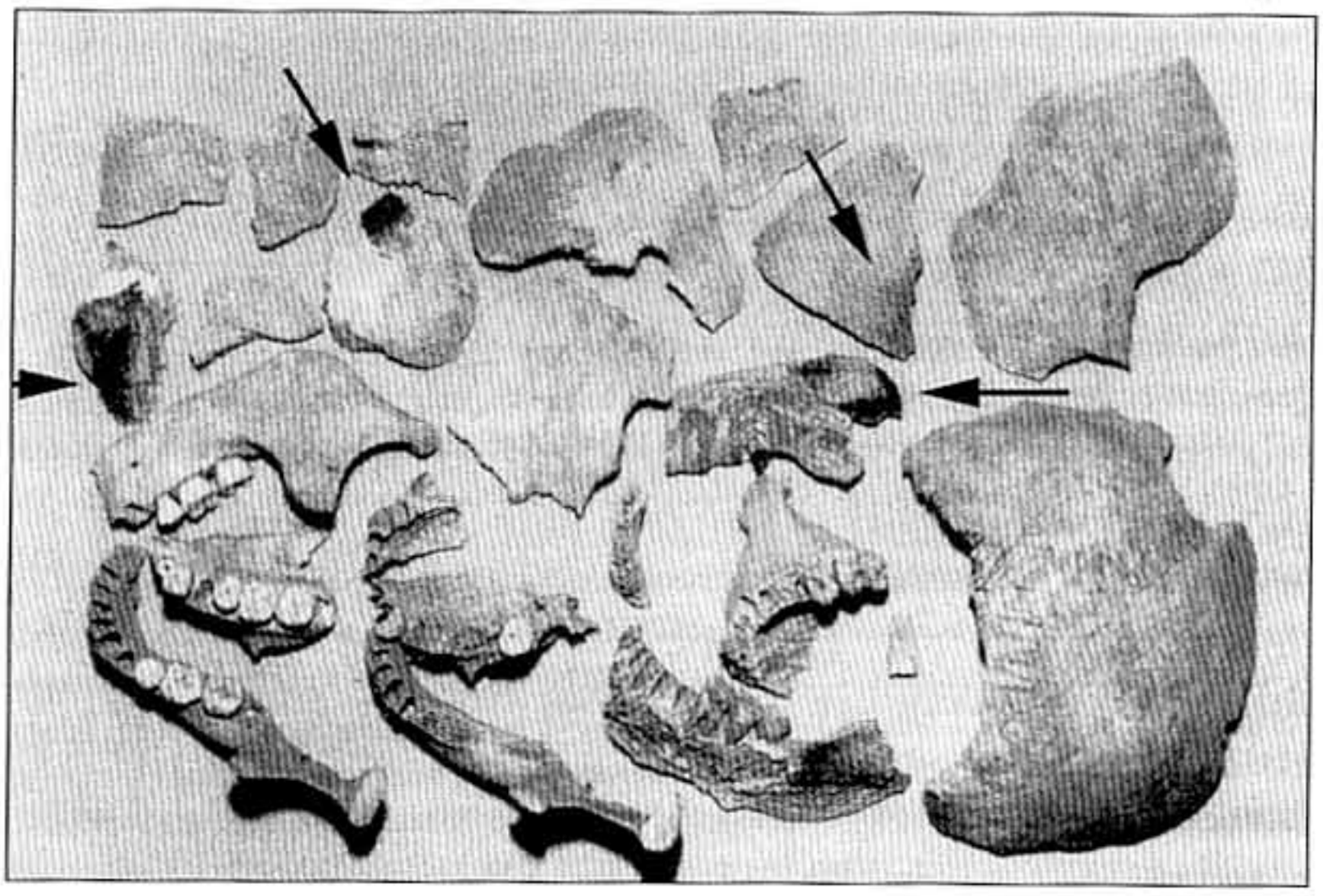

Fig. 3. Cannibalised human remains from the Canyon Butte Ruin 3 site in Arizona, dating to AD 1000–1200, and showing violent fracture and burning (arrows) of cranial remains. Photo: courtesy of C.G. Turner.

behaviour patterns that could be interpreted as warfare, continue to be absent in the Anasazi region from the eighth century through to the twelfth century. Indeed, as we sweep back across more than 10,000 years of human prehistory in the Anasazi area, through periods of great change in the development of agriculture, sedentism, major population growth and environmental fluctuations, there are no indications of organized inter-group conflict developing until the thirteenth century AD. The peace of the south-west is only broken when a complex of environmental and demographic variables finally lead to the violent appearance of warfare.

Beginning at about AD 1150, the environment of the northern south-west began to change. This was not particularly unusual, as the south-west witnessed environmental cycles about every three hundred years (Dean et al. 1985). In the century prior to AD 1150, the environment was characterised by winter-dominant precipitation, soils were building up, and the water table was relatively high. Then, beginning in the middle of the twelfth century, there was a switch to a summer-dominant precipitation pattern, soils began to erode away, and the water table dropped. The region witnessed cyclical droughts and the progressive loss of arable land. Areas that were marginal for agriculture at the beginning of the twelfth century were uninhabitable by the end of the century. In the mean time, the sharp upward population growth curve, which started with the development of agriculture, had reached a maximum. The result of high population coupled with a deteriorating environment led to severe economic stress among the Anasazi. This stress was most clearly manifested in the skeletal population. Human remains through the twelfth and thirteenth centuries show a significant rise in the markers of malnutrition, such as hypoplasias or Harris lines, among adults, and greatly increased infant and child mortality (Ryan 1977).

By the middle of the thirteenth century, the conditions were finally sufficiently harsh for a major outbreak of warfare in the Anasazi region. The initial signs of conflict appear in the 1240s, when a few small, isolated villages were constructed in strategically defensive locations. Over the course of the next ten to fifteen years, the material markers of warfare multiplied dramatically. By 1260, clear and unequivocal signs of warfare were ubiquitous across the entire region. We find burned houses, wrecked villages, bodies pierced by arrows, headless skeletons and skeletonless heads (Figs 4–5). People living out in the open began to build palisades around their villages, and other people took extraordinary measures to move their homes into protected and highly defensible locations (Wilcox & Haas 1994; Haas & Creamer 1993, 1996). The well-known cliff dwellings of the south-west, while romantic and mysterious today, were the defensive redoubts of people at war seven hundred years ago (Fig. 6). Aside from moving into defensible locations in the middle 1200s, the people were also aggregating together into much larger and more defensible towns and villages. In the first half of the thirteenth century, there were few villages of more than 2–25 rooms, whereas in the second half of the century, almost the entire population was living in communities of 75–400. Clearly, the Anasazi people found safety in numbers.

Altogether, the archaeological data provides a record of serious, endemic warfare all across the northern south-west, lasting for a period of about fifty years. Then, at AD 1300, the heartland of the most intensive Anasazi occupation was completely abandoned. Warfare does not appear to have been the immediate cause of this regional abandonment, in that there is little evidence of wholesale slaughter of people or destruction of large numbers of villages.

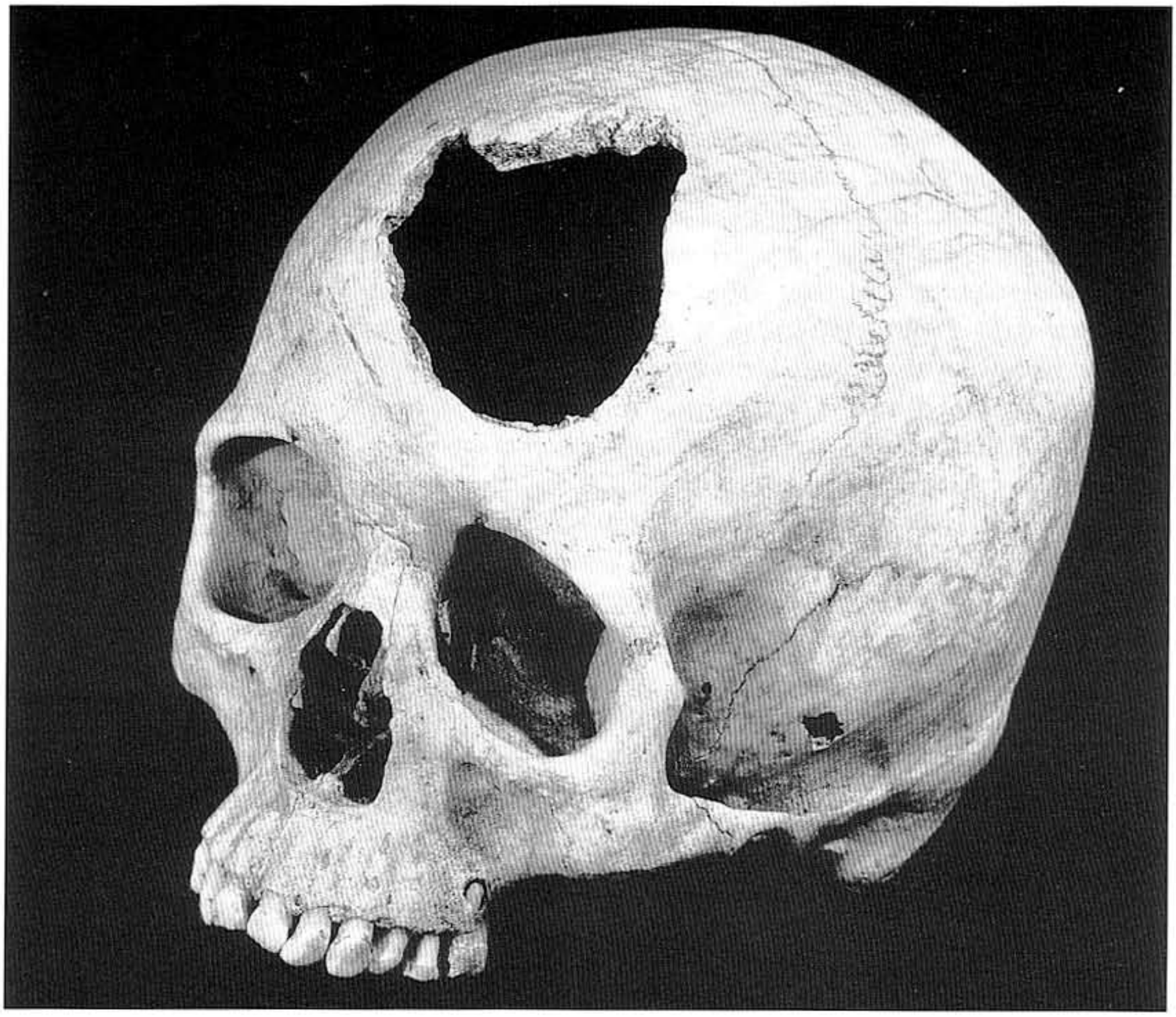

Fig. 4. Skull uncovered at the site of Kin Klethla (AD 1250–1300) in north-east Arizona, showing manifestations of violence with bashed-in forehead and one of two cut marks. Photo: author.

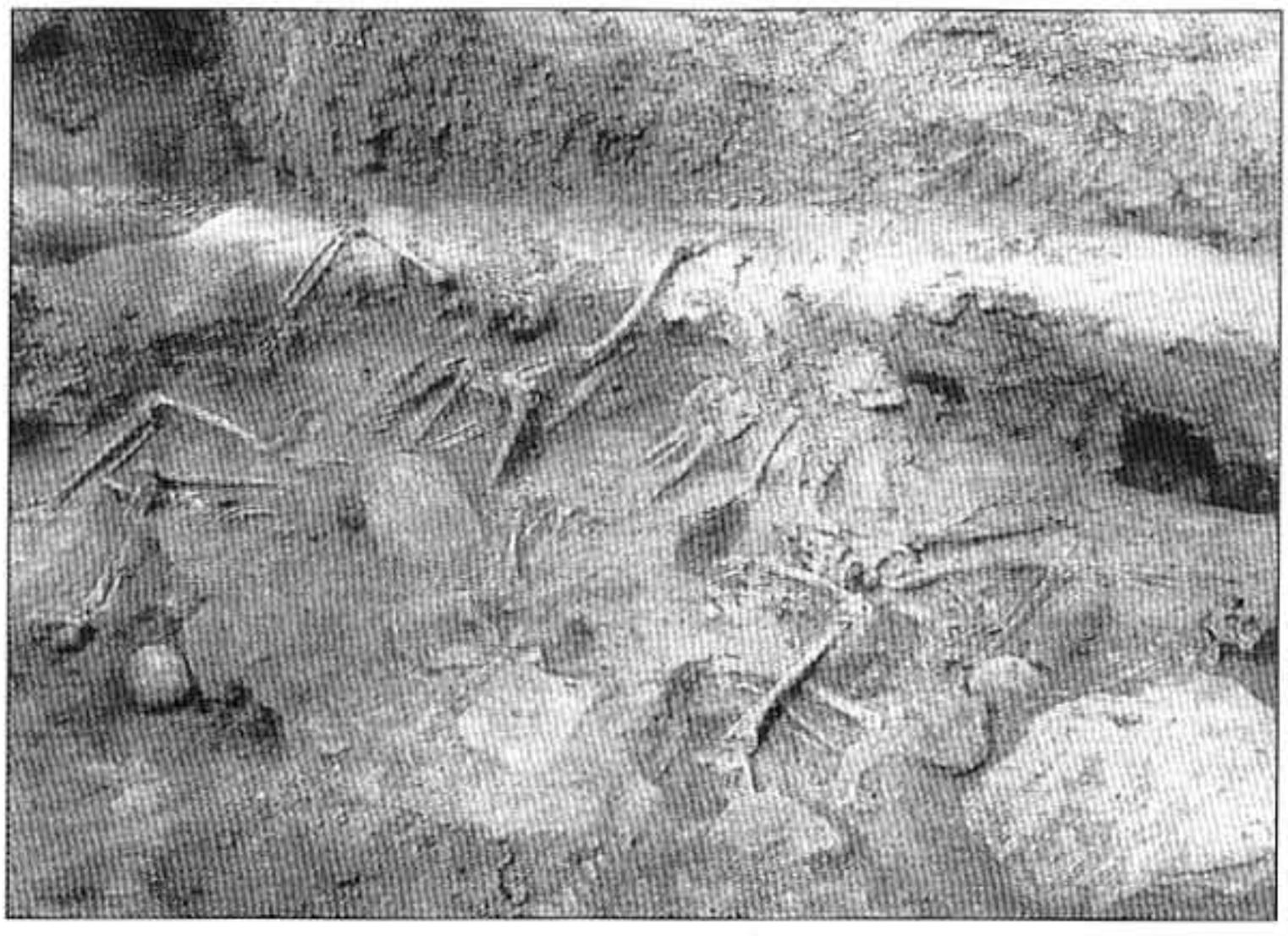

Fig. 5. Massacred remains of eight adults, two male youths (15–18 years old) and a 12-year-old individual of unknown sex. All these individuals were uncovered on a pithouse floor at the Largo-Gallina site in New Mexico, dating to AD 1100–1300. Photo: courtesy of C.G. Turner.

Rather, warfare played an indirect role in tipping the balance in a fragile ecosystem. In earlier, more peaceful times, local mobility was a preferred strategy in responding to environmental problems, such as erosion or a lowered water table. With the advent of warfare and much larger villages, however, the options for moving around locally and exploiting viable micro-environments were greatly reduced. By 1300, the combination of environmental stress and social conflict drove the inhabitants completely from the region.

If we look at the south-west after 1300, we find that environmental conditions improved significantly, with increased annual precipitation, soil erosion being reversed, and rising water tables. We are also able to follow the Anasazi as they moved into other parts of the south-west, and find that the level of warfare was greatly reduced as the environmental conditions improved. However, it is of interest to note that warfare remained a part of Anasazi life for the next five hundred years. The people stayed in large villages, they took basic steps to defend those villages, and there are occasional signs of violence in the skeletal population (Haas & Creamer 1997).

Fig. 6. Defensive cliff dwelling in north-east Arizona, dating to AD 1250–1300, showing climbing posts. The author is climbing the in situ aboriginal poles that provided access into the site. Photo: author.

The pattern seen in the prehistoric south-west has interesting implications in terms of both the causes of warfare and the social context of warfare in pre-state societies. Ultimately, the archaeological record of the Anasazi, extending back for thousands of years, makes it impossible to argue that warfare and fear of 'the other' is somehow natural to the human species. Warfare among the Anasazi was not an inevitable response to either ethnic diversification or to environmental stress and resource shortages. There are marked cultural differences between groups in the south-west well before the time of Christ and ethnically discrete branches of the Anasazi arising by AD 700. Yet the first signs of inter-group violence do not appear until AD 1250 – more than five hundred years later. Anasazi co-existed peacefully with culturally different groups around their borders for more than a thousand years, and within the Anasazi culture area, ethnically distinct groups lived side by side for centuries, generation after generation, with absolutely no signs of organised conflict or war. The violent markers of raiding, killing and burning appear only very late in Anasazi culture, as a complex response to changing demographic patterns and a prolonged period of severe environmental stress.

We will now turn briefly from the south-western United States to look at a second and very different pattern of warfare in eastern North America. Eastern North America is

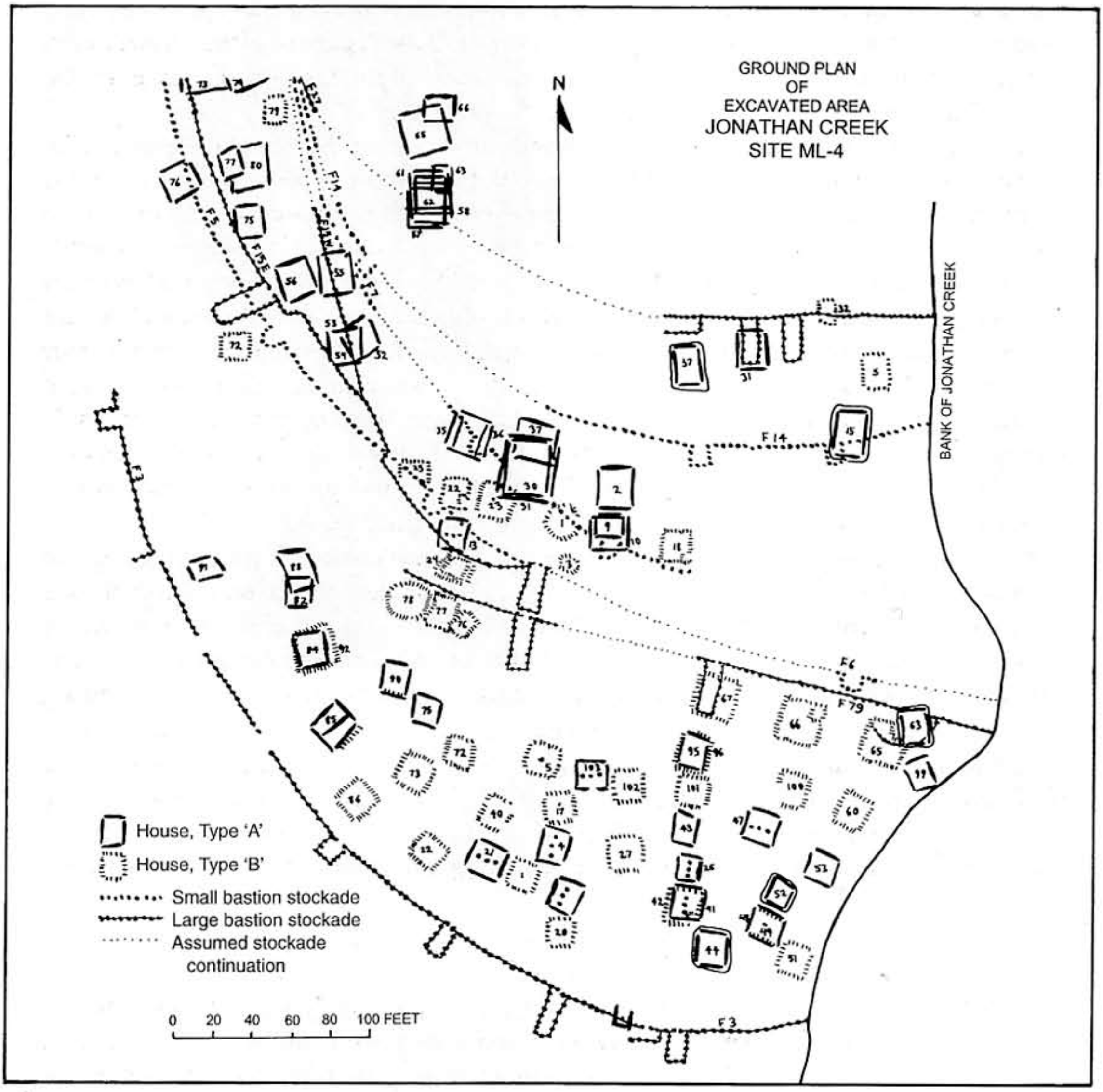

Fig. 7. Map of the Jonathan Creek site (AD 1400–1600) in Marshall County, Kentucky, showing typical houses surrounded by defensive bastion stockades (rectangular structures protruding from the stockade).

strikingly different from the south-west in terms of both environment and the evolution of war. The east is much wetter overall, and has a much greater abundance of natural resources. In adapting to these environmental circumstances, some early inhabitants in the area, particularly in the central south, moved fairly quickly from nomadic hunting and gathering to a more sedentary lifestyle. Their settled communities were centred on rich resource zones, and there was little reason to move seasonally or annually (Streuver & Holton 1979). However, the area was not an unlimited paradise. As population grew, all the best resource locations were quickly occupied, and people were gradually pushed into

less favourable zones. These more marginal zones may have provided adequate resources in good years, but may not have been able to meet the needs of the resident population in bad years. This combination of environment and demography then set the stage for the early appearance of pre-agricultural warfare in the east.

Fully within the context of settled hunting and gathering, we then see the appearance of warfare and systematic violence by 5000 BC, several thousand years before it occurred in the south-west. Archaeologically, the warfare in this early period is manifested primarily in the form of human casualties – bodies found with scalp marks, decapitation, and projectile points stuck in bones (Milner 1995; 1998; Smith 1995). The sites in the period between 5000 and 2000 BC are mostly shell middens, with few signs of formal residential architecture and no indications of defensive features such as palisades. It is also important to note that there are no material manifestations to indicate any ethnic or cultural differences between the people engaged in the fighting. Styles of projectile points and other artefacts are relatively uniform across the areas of conflict. Whereas in the south-west we saw warfare arising only after the development of ethnic and cultural differences, in the east we see warfare arising prior to the appearance of such differences in the archaeological record.

Between 2000 BC and the time of Christ, the East witnessed a gradual transition towards less reliance on gathered resources, and increased dependence on cultivation of a variety of food crops (Smith 1989). The pattern of settled communities did not change qualitatively during this transition, but the nature of social and ecological relationships changed. The development of horticulture meant that there were many more 'good' zones, and fewer 'bad' ones. As a result, continued population growth did not require some people to move into marginal zones while others monopolised a limited amount of prime productive land. There was adequate arable land to meet the needs of a growing population for more than 2,000 years. So what happens to the signs of warfare in the prehistoric record for this period? They largely disappear (Milner 1998). Although there are occasional skeletons with indications of violence, they are quite rare in the overall skeletal population. There is also an absence of conflict or defensive posturing among the many sites and settlements known from this time.

Thus, following a 3,000-year period during which conflict was relatively common among settled hunters and gatherers, we see a period of more than 2,000 years of peace among settled village horticulturalists. This pattern of peaceful relations is broken by the beginning of the second millennium AD, when warfare again appears across the eastern United States – and it does so with a vengeance. Villages are fortified (Fig. 7), massacres and war deaths are common (Fig. 8), and warfare iconography and symbolism are prevalent (Milner 1998; Peregrine 1992; 1993; Anderson 1994). Warfare continues and intensifies in the region again until the intrusion of the English, Spanish and French in the sixteenth and seventeenth centuries. Unfortunately, there is not as much environmental and chronological detail in the archaeological record of the East as there is for the south-west, and at the moment we cannot explore possible short-term exceptions to these millennial patterns. The eastern data, however, do provide another excellent case for the valuable insights to be gained through the study of the archaeology of warfare.

As the other chapters in this volume attest, archaeologists and their laboratories of time can provide an important perspective on both the science and history of warfare across the

Fig. 8. Crow Creek, South Dakota – massacre site of nearly five hundred men, women and children, dating to AD *1325, and showing signs of warfare through the mutilation and scalping of the dead. Photo: courtesy of P. Willey.*

globe. However, to realise the potential strength of the archaeological record, we must occasionally look up from our stones, bones and ancient sites and bring the record of the ancient past to bear on the issues of the contemporary world. By looking at the distant past of prehistory, we may be able to extract a somewhat more optimistic view of human nature than we might derive solely from reading news accounts of the modern world. There is good, solid evidence from North America to affirm that humans are not inherently warlike animals just looking for opportunities to attack and conquer one another. The peaceful record in the south-west shows that warfare is not a first, second or even third resort of people faced with stress, uncertainty and growing population densities. It is indeed the *last* resort of people faced with dying children and the threat of imminent extinction. The record from eastern North America also shows that a cycle of war lasting for thousands of years can be broken and replaced by a cycle of peace under the right set of environmental and economic conditions. As we look for answers to the ever-present problem of warfare in the modern era, we must look beyond human nature and search for the root causes of warfare that are to be found in demography, the environment and the economic conditions of the many different societies struggling to co-exist on the face of our planet.